



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/854,686	05/12/97	ROSS	77790-46762.

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EXAMINER  
KASHNIKOW, A

ART UNIT	PAPER NUMBER
3752	

DATE MAILED: 10/04/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**08/854,686**

Applicant(s)  
**Ross et al**

Examiner  
**Andres Kashnikow**

Group Art Unit  
**3752**



☒ Responsive to communication(s) filed on IDS filed 6/12 & 22, 1998 and 8/3/99

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-17 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☒ Claim(s) 1-3 and 7-17 is/are allowed.

☒ Claim(s) 4-6 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☒ received in Application No. (Series Code/Serial Number) 07/620,416.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 5-7

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. The Information Disclosure Statements file June 12 and 22, 1998, and August 3, 1999 have been considered.
2. The Drawings filed May 12, 1997 have been approved by the Official Draftsman.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham in view of Steinmeier et al (German Patentschrift No. 264,552).

Claim 4 corresponds to patented claim 4 rewritten in independent form. As acknowledged by applicants in the declaration accompanying the instant reissue application, the Ketcham patent discloses all that was recited in patented claim 1. Thus the only feature recited in claim 4 that does not appear in Ketcham, is the liquid repellant coating applied to the front surface of the perforate membrane. Steinmeier et al discloses that at least the surface of the ultrasonic device that contacts the substance to be atomized should be coated with a layer that is resistant to the substance to be atomized to provide increased reliability, and meet all chemical, mechanical and physiological requirements, particularly with respect to dynamic loads and adhesion. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to

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have coated at least the front surface of the membrane 13 of Ketcham with a liquid repellant coating as suggested by Steinmeier et al, to increase the reliability of Ketcham's device.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham in view of Maehara et al '234.

Claim 5 corresponds to patented claim 5 rewritten in independent form. As acknowledged by applicants in the declaration accompanying the instant reissue application, the Ketcham patent discloses all that was recited in patented claim 1. Thus, the only feature recited in claim 5 that does not appear in Ketcham, is the type of liquid being atomized. Maehara et al '234 in column 1, lines 1-9 suggests that devices such as the one being claimed by applicants can be used to atomize a wide variety of liquids. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention to have used Ketcham's device to atomize pharmaceutical products in aqueous solution or suspension in view of the suggestion by Maehara et al '234 that such devices can be used to atomize a wide variety of products.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham in view of Maehara et al '234 as applied against claim 5 above, and further in view of TSI Inc. Catalog "Vibrating Orifice Aerosol Generator" and "Generation of Monodisperse Aerosol Standards" (Environ. Sci. Technology, Vol. 7, No.2, pp 147-153).

Claim 6 corresponds to patented claim 6 rewritten in independent form. Again, as acknowledged by applicants in the declaration accompanying the instant reissue application, the Ketcham patent discloses all that was recited in patented claim 1. Thus, the features recited in

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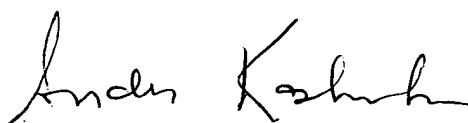
claim 6 that do not appear in Ketcham are the type of liquid being atomized (already addressed by the Maehara et al reference), and the size of the holes at the front surface. The TSI catalog and the article "Generation of Monodisperse Aerosol Standards" describe the correlation between orifice size and droplet size. Thus, it is deemed to have been well within the realm of one having ordinary skill in the art at the time of the invention to have determined the appropriate orifice size for the device of Ketcham in order to produce the desired particle size, in view of the article and catalog.

7. Claims 1-3, and 7-17 are allowed.

8. Any inquiry concerning this communication should be directed to Andres Kashnikow at telephone number (703) 308-1137.

AK

10/2/00

  
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